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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/715,430 | 11/19/2003 | Michael K. McInerney | COE-566 | 5350 |
| 30046 | 7590 | 11/03/2006 | EXAMINER | |
| HUMPHREYS ENGINEER CENTER SUPPORT ACTIVITY ATTN: CEHEC-OC 7701 TELEGRAPH ROAD ALEXANDRIA, VA 22315-3860 | | | SPAHN, GAY | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3635 | |

DATE MAILED: 11/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/715,430 | MCINERNEY ET AL. |
| | Examiner | Art Unit |
| | Gay Ann Spahn | 3635 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 June 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-3 and 5-35 is/are pending in the application.
- 4a) Of the above claim(s) 10, 11 and 13-35 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3, 5-9 and 12 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

*Brent K. Kroll
DRAFTSPERSON'S DRAWING REVIEW
PCT Rule 17.2(a))* 10/26/06

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 6, 9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over DAHLANDER (U.S. Patent No. 2,036,123) in view of BORLAND (U.S. Patent No. 5,369,926).

As to claim 1, DAHLANDER discloses a method of implementing a barrier (3) to fluid flow in at least one direction, said barrier (3) comprising:

 placing a first layer of concrete;
 applying at least one layer of adhesive material (4) to the top surface of said first layer of concrete, said at least one layer of said adhesive material (4) to include a topmost layer of said adhesive material (4);

 placing multiple panels (sheet metal strips 10, 10,...) incorporating at least one layer of non-porous material (metal - see page 1, second column, lines 14-26) upon said topmost layer of said adhesive material (4),

 overlapping edges of said panels (10, 10,...) with edges of any said panels (10, 10,...) placed adjacent thereto (see Figs. 2, 4, and 5), wherein said panels (10, 10,...) completely cover said topmost layer of said adhesive material (4);

sealing all said overlapped edges (see either Fig. 4 and page 2, first column, lines 7-21 or Fig. 5 and page 2, first column, lines 22-31) ; and
emplacing at least one flooring structure/wear surface (2) upon said panels (10, 10,...) such that said panels (10, 10,...) are confined below said flooring structure/wear surface (2) and above said topmost layer of said adhesive material (4),
wherein the step of placing said panels (10, 10,...), the step of sealing said overlapped edges of said panels (10, 10,...), and the step of emplacing said flooring structure/wear surface (2) completes implementation of said barrier (3).

DAHLANDER fails to explicitly disclose that the step of emplacing the at least one flooring structure/wear surface includes emplacing a second layer of concrete upon said panels (10, 10,...) such that said panels (10, 10,...) are confined below said second layer of concrete and above said topmost layer of said adhesive material (4), wherein the step of placing said panels (10, 10,...), the step of sealing said overlapped edges of said panels (10, 10,...), and the step of emplacing said second layer of concrete completes implementation of said barrier (3).

BORLAND discloses a flooring structure having a bottom concrete base deck (10) below a waterproof membrane (20) which may be attached to the concrete base deck (10) and having a topmost concrete wearing slab (50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of implementing a barrier to fluid flow in at least one direction of DAHLANDER by making the topmost wear layer be made of

concrete as taught by BORLAND in order to provide better wearing characteristics since concrete is a material strong in compression.

As to claim 2, DAHLANDER in view of BORLAND discloses the method of claim 1 as discussed above, and DAHLANDER also discloses that said panels comprise non-porous material (sheet metal, preferably copper) selected from a group consisting of: a metal, a metal alloy, a steel alloy, a stainless steel, a composite material, a composite material containing at least some metal, and combinations thereof.

As to claim 3, DAHLANDER in view of BORLAND discloses the method of claim 1 as discussed above, and DAHLANDER also discloses that said barrier (3) employs non-porous material (sheet metal, preferably copper) comprising at least in part a first metal.

As to claim 6, DAHLANDER in view of BORLAND discloses the method of claim 1 as discussed above.

Neither DAHLANDER nor BORLAND explicitly disclose that the step of applying said second layer at a thickness of about at least 2.5 cm (1.0 inch).

However, it is well settled that changes in size/proportion (i.e., dimensions) do not constitute a patentable difference. See *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process

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capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F.2d at 1053, 189 USPQ at 148.). Further, *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

Therefore, it would have been obvious expedient to one of ordinary skill in the art at the time the invention was made of modify the method of implementing a barrier to fluid flow of DAHLANDER in view of BORLAND by making the concrete layer be 2.5 cm (1.0 inch) thick in order to provide a wear surface strong in compression, but relatively thin to save on material cost and since it is well founded that merely changing dimensions is not unobvious (see *Brunswick Corporation v. Champion Spark Plug Company*, 216 USPQ 1 (CA 7 1982).

As to claim 9, DAHLANDER in view of BORLAND discloses the method of claim 1 as discussed above, and DAHLANDER also discloses that the step of providing said panels as at least one plate.

Neither DAHLANDER nor BORLAND explicitly disclose that the at least one plate has a total thickness less than about 6 mm (0.25 inch).

However, it is well settled that changes in size/proportion (i.e., dimensions) do not constitute a patentable difference. See *In re Rose*, 220 F.2d 459, 105 USPQ 237

(CCPA 1955) (Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F.2d at 1053, 189 USPQ at 148.). Further, *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

Therefore, to make the at least one plate have a total thickness less than about 6 mm (0.25 inch) would have constituted an obvious expedient to one having ordinary skill in the art at the time the invention was made in order provide strength, yet save on material costs and since it is well founded that merely changing dimensions is not unobvious (see *Brunswick Corporation v. Champion Spark Plug Company*, 216 USPQ 1 (CA 7 1982).

As to claim 12, DAHLANDER discloses the method of claim 1 as discussed above, and DAHLANDER also discloses that the step of providing the panels as at least one foil.

However, DAHLANDER fails to explicitly disclose that the least one foil has a thickness less than about 1 mm (40 mil).

However, it is well settled that changes in size and/or proportion between the invention and the prior art do not constitute a patentable difference. See *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F.2d at 1053, 189 USPQ at 148.). Further, *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

Therefore, to make the at least one plate be a foil (i.e., very thin sheet metal) having a total thickness less than about 1 mm (40 mils) would have constituted an obvious expedient to one having ordinary skill in the art at the time the invention was made in order to be able to provide the waterproofing function, yet remain as thin as possible to save on material costs and since it is well founded that merely changing

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dimensions is not unobvious (see *Brunswick Corporation v. Champion Spark Plug Company*, 216 USPQ 1 (CA 7 1982).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over DAHLANDER (U.S. Patent No. 2,036,123) in view of BORLAND (U.S. Patent No. 5,369,926), as applied to claim 1 above, and further in view of BEAN ET AL. (U.S. Patent No. 6,286,279).

As to claim 5, DAHLANDER in view of BORLAND discloses the method of claim 1 as discussed above.

Neither DAHLANDER nor BORLAND explicitly disclose that the step of employing said adhesive material comprises at least in part a thin set mortar deposited at a thickness of about 6 mm (0.25 inch).

BEAN ET AL. teach the use of an adhesive layer (18) of a Portland cement-based adhesive to bond a steel foil (12) to concrete (C). However, BEAN ET AL. do not explicitly disclose that the adhesive layer is about 6 mm (0.24 inch).

However, it is well settled that changes in size/proportion (i.e., dimensions) do not constitute a patentable difference. See *In re Rose*, 220 F.2d 459, 105 USPQ 237

(CCPA 1955) (Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F.2d at 1053, 189 USPQ at 148.). Further, *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made of modify the method of implementing a barrier to fluid flow of DAHLANDER in view of BORLAND by replacing the adhesive (waterproof adhesive, such as asphalt layer 4 - see page 1, second column, lines 28-29) of DAHLANDER in view of BORLAND with the Portland cement-based adhesive as taught by BEAN ET AL. in order to form a bond between the concrete and metal that does not degrade in the presence of moisture and alkalinity, and to make the adhesive layer 6 mm (0.25 inches) thick would have constituted a further obvious expedient to one having ordinary skill in the art at the time the invention was made since it is well founded that merely changing

dimensions is not unobvious (see *Brunswick Corporation v. Champion Spark Plug Company*, 216 USPQ 1 (CA 7 1982).

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over DAHLANDER (U.S. Patent No. 2,036,123) in view of BORLAND (U.S. Patent No. 5,369,926), as applied to claim 1 above, and further in view of SCHIRMER (U.S. Patent No. 4,155,209).

As to claim 7, DAHLANDER in view of BORLAND discloses the method of claim 1 as discussed above.

Neither DAHLANDER nor BORLAND explicitly disclose that the step of sealing said overlapped edges is done at least in part by applying a continuous bead of at least one sealant along the entire length between each said overlapped edge, wherein said sealant remains flexible upon curing.

SCHIRMER discloses a fluid-sealed sheet metal joint wherein the step of sealing said overlapped edges is done at least in part by applying a continuous bead of at least one sealant along the entire length between each said overlapped edge, wherein said sealant remains flexible upon curing (see col. 3, lines 18-49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made of modify the method of implementing a barrier to fluid flow of DAHLANDER in view of BORLAND by replacing the sealant (sealing wire 11 or sealing ribbon 14) of DAHLANDER with the flexible room temperature vulcanizing (RTV)

sealant taught by SCHIRMER in order to provide a waterproof joint that will remain so even after being subjected to numerous freeze and thaw cycles (see col. 1, lines 16-25).

As to claim 8, DAHLANDER in view of BORLAND and SCHIRMER discloses the method of claim 7 as discussed above, and SCHIRMER also discloses that a room temperature vulcanizing (RTV) sealant (see col. 3, lines 18-49) is employed as said at least one sealant.

Response to Arguments

Applicant's arguments filed 14 June 2006 have been fully considered but they are moot in view of the new grounds of rejections.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gay Ann Spahn whose telephone number is (571)-272-7731. The examiner can normally be reached on Monday through Thursday, 8:30 am to 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Naoko N. Slack can be reached on (571)-272-6848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GAS
Gay Ann Spahn, Patent Examiner
October 14, 2006

Basil Kalthe
SACIL KALTHE
PRAVATI PRAVATI
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